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DEVELOPMENT OF AGRICULTURE IN UPPER GEORGIA FROM 1890 TO 1920.

ROLAND M. HARPER, PHD.
Geological Survey of Alabama.

The March number of the Quarterly contained an account of the condition and progress of agriculture in upper Georgia from 1850 to 1880, chiefly deduced from government census figures. The present paper, based on the decennial censuses of 1890 to 1920 inclusive, brings the story practically down to the present time. The methods of dividing the area into natural regions and tabulating and digesting the data were discussed in the former article, and need not be repeated here, but changed conditions and innovations in the census returns will be explained at the proper places.

A few works dealing with conditions in upper Georgia, or the whole state, at a later period than those cited in the first paper, should be mentioned here. R. T. Nesbitt, commissioner of agriculture, published in 1896 an illustrated handbook of nearly 500 pages, entitled "Georgia: Her Resources and Possibilities." It seems to be quite rare, and it is not cited in Brooks's Preliminary Bibliography of Georgia History (1910), or in the Bibliography of Georgia geology and geography in Bulletin 39, of the Geological Survey of Georgia (1922). About five years later the same department published another handbook about twice as large, "Georgia Historical and Industrial," by O. B. Stevens and R. F. Wright. That is well printed, and contains among other things a description of each county, with numerous undigested statistics of population and agriculture taken from the U. S. census of 1900; but it was made unnecessarily bulky and expensive by the inclusion of a considerable number of colored plates of fruits, poultry, etc., which convey no information about conditions in Georgia. Since then there have emanated from the same office several smaller handbooks which are probably now scarce, and hardly need to be mentioned here.

A Ph. D. dissertation by E. M. Banks, "Economics of Land Tenure in Georgia," published by the Columbia University Press in 1905, bears directly on some of our agricultural problems.

A profusely illustrated and cloth-bound but grotesquely shaped book entitled "Facts about Georgia," published for sale by the Georgia Chamber of Commerce early in 1917, contains a variety of information, but no map of the state or any part thereof, and it is probably scarce already. The writer contributed to it an eight-page chapter on forests, with brief descriptions of the natural regions of the state. In School Science and Mathematics (Chicago) for November, 1918, I had an article entitled "A new method of mapping complex geographical features, illustrated by some maps of Georgia." This contains four regional maps, one showing counties, railroads, etc., much like the one used in the present series of articles, and the others showing the prevailing soils, trees and crops in each region. In the High School Quarterly (Athens, Ga.) for July, 1919, I published a study of the distribution of illiteracy in Georgia, using the same regional map as in the last, and giving among other things the average value of white and negro farm buildings in each region in 1910.[1]

In Harper's Magazine for April and May, 1920, there is an article entitled "Marching through Georgia," by Stephen Graham. The author walked most of the way from Atlanta to Savannah in the fall of 1919, following Sherman's route, and his narrative, though more or less interesting, magnifies the faults and belittles the virtues of nearly everything he saw (and some things he did not see), and uses uncomplimentary adjectives wherever possible.[2] His point of view is typical of that of a great many outsiders who attempt to pass judgment on the South with a very limited knowledge of the facts.

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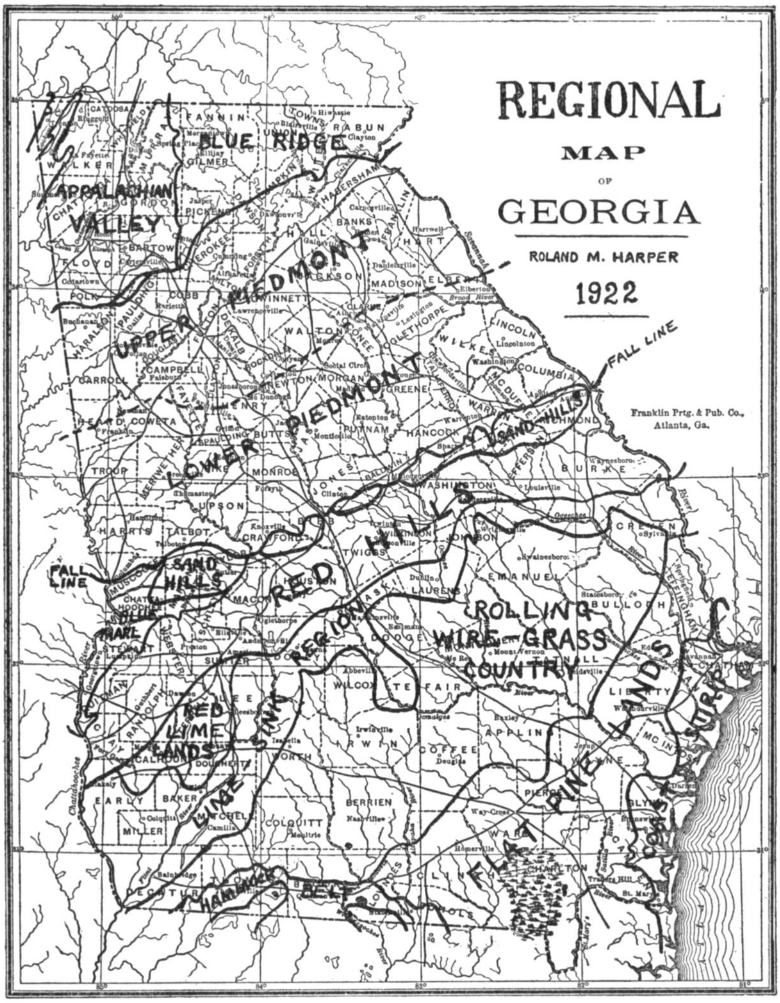
[1] In the case of these last two papers I was not given the opportunity to read proof and order reprints, but I soon afterward had them reprinted privately, with necessary corrections.

[2] For example, he characterizes the main line of the Georgia Railroad, which is or has been one of the most efficiently managed in this country, as a "wretched single track" and sneers at it for following essentially the same well-chosen route that it did before the Civil War.



Map showing geographical or agricultural divisions of Georgia. Only those north of the fall line are discussed in this article. The small areas without names in the northwestern portion are Sand and Lookout Mountains, representing the Cumberland Plateau, with a narrow strip of the Appalachian Valley between them (in Dade County), and an outlier of the Blue Ridge along the line between Polk and Paulding Counties. The railroads and county boundaries are shown as they were in 1885.

The counties in Georgia in 1890 were the same as in 1880.[1] The kinds of information given by the census were much the same, too, but the data will be handled a little differently here, on account of changing conditions, principally the increasing proportion of negro farmers. The same map is used as before, its background dating from 1885.

The cities and towns by this time had become so numerous that they will not be listed again, but instead the percentage of the population of each region living in communities of different sizes will be given. First, cities with over 8,000 inhabitants, which was used as the lower limit of urban population in 1880 and 1890. The next dividing point is 2,500, which has been the arbitrary limit of urban population in the census since 1900. The third group includes all other incorporated places with more than 1,000 inhabitants.

The enumeration of farms is said to have been less complete in 1890 than in 1880, but it is difficult to discover any evidence of that in the Georgia figures.

On account of the increasing proportion of negro farmers since emancipation, statistics of the average farms of both races combined now mean very little, but the races were not separated in the agricultural statistics of 1890. So instead of computing the acreage, value of property, number of animals, etc., *per farm,* the ratios are now given *per square mile.* And a column giving the same data for the whole state in 1880 is added to the first table, to show what changes had taken place in these respects in ten years, and also to establish a better connection between this article and the first one. For each region the percentage of increase of population since 1880 is also given. Separate figures for turkeys, geese and ducks on farms are available for the first time in 1890, but those birds are so few in comparison with chickens that they will be lumped together.

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[1] To save the reader the trouble of looking through several pages of the former article to pick out the names of the counties used to typify each region, they will be listed again here all together, as follows:

Appalachian Valley:— Bartow, Catoosa, Chattooga, Dade, Floyd, Gordon, Murray, Polk, Walker, Whitfield.

Blue Ridge:—Fannin, Gilmer, Pickens, Rabun, Towns, Union.

Upper Piedmont:—Banks, Campbell, Carroll, Cherokee, Clayton, Cobb, DeKalb, Douglas, Fayette, Forsyth, Franklin, Fulton, Gwinnett, Habersham, Hall, Haralson, Hart, Jackson, Madison, Milton, Paulding, Walton.

Lower Piedmont:—Baldwin, Butts, Columbia, Greene, Hancock, Harris, Jasper, Jones, Lincoln, McDuffie, Meriwether, Monroe, Morgan, Oglethorpe, Pike, Putnam, Spalding, Talbot, Taliaferro, Troup, Upson, Warren, Wilkes.

(In all the tables in which different regions are contrasted, the printers inadvertently set the highest number in each line in italics and the lowest in heavy type, just the reverse of what was done in the two preceding articles. But it would be so much trouble to re-set seven tables that they have been allowed to stand as they are.)

TABLE I.

AGRICULTURAL STATISTICS OF UPPER GEORGIA, 1889-90.

	Appalachian Valley	Blue Ridge	Upper Piedmont	Lower Piedmont	Whole State	
					1890	1880
Inhabitants per square mile ..	40.1	**22.2**	*54.5*	38.5	31.2	26.2
Per cent increase since 1880 ..	14.5	18.1	11.4	**5.6**	*19.1*	....
Per cent white	77.0	*97.8*	72.6	**36.4**	53.3	53.0
Per cent colored	23.0	2.2	27.4	*63.6*	46.7	47.0
Per cent in cities of over 8,000	0	0	*17.8*	0	10.8	7.3
Per cent in cities of 2,500-8,000	*9.8*	0	1.8	4.1	3.2	2.1
Per cent in cities of 1,000-2,500	1.2	0	1.7	*2.8*	2.6	2.7
Per cent of land improved	30.1	**15.7**	36.2	*42.5*	25.6	21.9
Improved acres per inhabitant	4.9	4.5	**4.3**	*7.1*	5.2	5.3
Value of farm land and bldgs. per square mile	4130	**1330**	*4800*	3730	2590	1905
Value of implements and machinery per square mile ..	137	**39**	136	*139*	98	90
Value of live-stock per sq. m.	*790*	**375**	755	754	536	**441**
No. of horses per sq. mile....	*3.4*	1.8	2.5	1.9	**1.76**	1.68
No. of mules per.sq. mile	3.6	**1.4**	4.3	*4.5*	2.67	2.26
No. of work oxen per sq. mile	1.0	*3.2*	1.5	**0.6**	0.84	0.85
No. of milch cows per sq. mile	6.6	5.1	*6.9*	5.0	**4.90**	5.37
No. of other cattle per sq. mile	*10.5*	8.2	9.1	**6.8**	9.15	9.30
No. of sheep per sq. mile	8.3	*19.3*	5.0	**1.6**	7.50	9.00
No. of hogs per sq. mile	*28.1*	25.4	23.2	**21.3**	23.8	25.1
No. of chickens per sq. mile ..	242	157	*279*	160	**125**	39
No. of other poultry per sq. m.	*23.0*	19.0	12.3	**7.8**	9.3	20.0
Cost of fertilizers per sq. m...	61.5	**4.14**	*156*	145	97.60	74.00
Value of f. products per sq. m.	1360	**440**	1920	*2450*	1420	1143
Cost of fertilizer per impr. acre	.32	**.04**	*.67*	.52	.60	.53
Value of farm products per impr. acre	7.07	**4.37**	8.29	*9.02*	8.70	8.17
Per cent of impr. land in cotton	21.8	**2.4**	32.2	*40.0*	34.9	31.9
Per cent of impr. land in corn	29.4	*42.7*	26.6	**21.2**	27.0	30.9
Per cent of impr. land in oats	*8.0*	5.3	7.2	**4.3**	5.4	7.5
Per cent of impr. land in wheat	6.5	*8.3*	5.0	**1.2**	2.1	5.8
Bales of cotton per acre	.35	**.21**	.36	*.37*	.36	.31
Bushels of corn per acre	*16.8*	13.9	13.2	**11.0**	11.3	9.2
Bushels of oats per acre	*9.9*	7.1	8.1	9.7	9.2	9.0
Bushels of wheat per acre	*6.5*	**4.4**	5.2	6.4	5.6	6.7

From Table 1 it appears that every region in upper Georgia increased substantially in population between 1880 and 1890, and the proportions of whites and negroes did not change much. The cities grew faster than the country, as usual, and although in the whole state there appears to have been a slight decrease in the 1,000 to 2,500 class, that is easily explained by several places which had a little less than 2,500 people in 1880 getting above that limit by 1890. The only city with over 8,000 was Atlanta, but that already had over one-sixth of the population of the Upper Piedmont. (Of course the fall-line cities of Augusta, Macon and Columbus belong partly to the Lower Piedmont, and if the counties containing them had been included it would have made a considerable difference in the urban population, as well as a little difference in farm values, etc.)

The percentage of improved land increased, by clearing away the forests, in every region, at approximately the same rate as the population. The value of farm property increased too, though the census figures do not show that adequately, on account of the fall in prices of commodities which had been in progress ever since the seventies.

The number of four-footed animals, except sheep and hogs, increased in most regions. The number of chickens more than trebled in every region, if the census figures are correct (but I have seen no explanation of such a great change, and there may be some mistake about it), but other poultry fell off. It is interesting to note (though I have not brought it out in the tables and cannot explain it) that the upper Piedmont had only about half as many turkeys as ducks, and one and a half times as many geese as ducks, while the lower Piedmont had six times as many turkeys and eight times as many geese as ducks.

The expenditure for fertilizer per improved acre remained about the same as in 1880, but the quantity used must have been somewhat greater. There was little increase in the value of products per acre, even when the decline of prices is taken into consideration. There was a growing tendency to specialize in cotton, except in the lower Piedmont, while corn, oats and wheat fell off in every region. But of course the acreage and yield of every crop fluctuates from year to year, and the census years may have been above or below normal in those respects. The yield of corn and oats per acre seems to have increased and that of wheat decreased, but all that may have been due to weather, insects, or something of the sort.

The census of 1900 brought several innovations. Most significant for our purposes is that the number of white and colored farmers was given for the first time, and quite a variety of data about them for whole states, but nothing by counties except classifying them by tenure. ("Colored" includes Indians and Mongolians as well as negroes, but there are not enough red and yellow farmers in Georgia to affect the ratios perceptibly.)

The value of farm buildings was now separated from that of land and fences, so that for the first time we can calculate the average value of farm land per acre. (But even yet separate values are not given for improved and unimproved land, which of course differ considerably.) Some of the animals were divided into several classes according to age, sex, etc. (eight for cattle alone), but that is more detail than it is practicable to use in a magazine of this sort, so that those distinctions will be ignored for the present. Goats and bees are now returned for the first time.

The counties were the same as in 1890, and I have not detected any errors in either census.

In Table 2 the value of property, number of animals, etc., in each region is given per square mile as before, but another table (3) is added to show the contrasts between white and colored farmers in the whole state, such data not being available for separate regions or counties in 1900. For this table separate figures could have been computed for the various tenure classes of each race ,but that would have been tiresome for both writer and reader, and would be more appropriate for an agricultural or economic than a historical treatise. Likewise a mass of detail could have been given about the acreage and yield of different crops in each region, but that too would have been too much of an undertaking. (Some such data for 1919 are given farther on, though.)

TABLE 2.

GENERAL AGRICULTURAL STATISTICS OF UPPER GEORGIA, 1899-1900.

	Appalachian Valley	Blue Ridge	Upper Piedmont	Lower Piedmont	Whole State
Inhabitants per square mile	44.7	**25.5**	*71.5*	41.8	37.6
Per cent increase since 1890	11.5	14.2	*21.6*	**8.3**	20.6
Per cent white	78.4	*97.6*	72.4	**35.4**	53.3
Per cent colored	21.6	**2.4**	27.6	*64.6*	46.7
Per cent in cities of over 2,500	12.2	0	*22.1*	6.1	15.6
Per cent of land improved	32.6	**17.2**	*39.9*	38.6	28.1
Improved acres per inhabitant	4.8	4.3	**3.8**	*5.9*	4.8
Per cent of farmers white	85.7	*99.2*	82.0	**43.6**	63.2
Per cent of white farmers owners ...	**42.1**	*64.4*	43.1	46.0	50.8
Per cent of white farmers cash tenants	7.4	**1.2**	10.5	*35.0*	17.0
Per cent of w. farmers share tenants	*45.3*	31.7	42.3	**14.5**	27.7
Per cent of colored farmers owners..	18.1	*29.8*	8.0	**5.5**	11.5
Per cent of c. farmers cash tenants ..	11.2	0	16.5	*52.5*	42.0
Per cent of c. farmers share tenants ..	66.4	58.0	*72.8*	**40.3**	44.1
Value of farm land per acre ($)	7.30	**2.40**	*7.95*	6.05	5.26
Value of farm property per sq. m. ($)	4496	**2087**	*6717*	4927	3920
No. of horses per sq. mile	*3.9*	**2.1**	3.6	2.6	2.16
No. of mules per sq. mile	4.6	**2.5**	*5.6*	5.0	3.53
No. of cattle per sq. mile	15.3	13.2	*17.7*	**12.2**	15.3
No. of sheep per sq. mile	5.6	*14.6*	2.0	**0.9**	5.73
No. of goats per sq mile	1.1	0.6	**0.2**	1.4	*1.46*
No. of hogs per sq. mile	23.7	*29.3*	**17.2**	18.3	24.2
No. of chickens and guineas per sq. m.	117	**55**	*133*	86	77.5
No. of other poultry per sq. mile	*10.4*	7.2	6.0	**4.9**	6.4
No. of colonies of bees per sq. mile ..	6.2	6.9	*7.2*	2.7	3.2
Cost of labor per improved acre ($)..	.36	**.11**	.38	*.98*	.68
Cost of fertilizers per impr. acre ($)	.35	**.06**	.66	.66	.54
Value of products not fed to stock, per improved acre	8.40	**6.90**	9.66	*11.40*	8.68

The population continued to increase, particularly in the upper Piedmont, where Atlanta and other cities were growing rapidly. The percentage of improved land increased a little, except, in the lower Piedmont, which is now surpassed by the upper Piedmont in that respect. The number of improved acres per inhabitant decreased a little in every region, on account of the growth of cities and increased intensity of farming.

The percentage of whites among farm operators was everywhere greater than in the aggregate population, show- the tendency of rural negroes (at that place and time, but not necessarily everywhere and always) to be hired laborers rather than farm owners or tenants. There were more tenants than owners, even among the whites, except in the mountains, where land was cheap and therefore easy to own.

The value of farm property per square mile seems to have increased in most of the regions, although average prices were lower in 1900 than in 1890 (and almost the lowest in the whole history of the United States, the bottom having been reached in 1896-7, just before the opening up of the Klondike and a few other important gold fields.)

In most of the regions the number of horses, mules and cattle increased and sheep, hogs and poultry decreased, but that may not mean much, except in the case of sheep, which in the South and West are raised mostly on free range and were steadily losing ground with the extension of the cultivated area. In the whole state only about 7% of the horses and 3% of the mules were under two years old, showing that these animals were no longer raised much in Georgia, but mostly imported. The percentage of young animals was above the state average though in the Appalachian Valley, where conditions are more like those in Kentucky and Missouri, and in the Blue Ridge, where difficulties of transportation compel the farmers to depend more on their own resources.

The differences between white and colored farmers (Table 3) are just about what we should expect from two races differing so in efficiency and standards of living. Some northern writers have given the negro special credit for having a larger proportion of his land improved than the white man, but that is doubtless merely because he cannot afford to own or rent much wild land, and has fewer cattle to be pastured. For this reason his land is usually worth a little more per acre than that of the average white man in the same region. There is not as much difference in value of products per acre as one who had not given the matter any thought might expect, for the negro's improved land is necessarily assessed at about the same figure as that of his white neighbor, and if he did not make nearly as much off of it he would be unable to pay the rent or taxes. The difference between the two races is much more in the number of acres cultivated than in the production per acre. It seems that the ratio between efficiency and standards of living is much the same for whites as for negroes, all over the South, which tends to keep their relative numbers about the same from year to year when there is no disturbing influence. (If a race of farmers with high efficiency combined with low

TABLE 3.

STATISTICS OF WHITE AND COLORED FARMERS IN GEORGIA, 1899-1900.

	White	Colored
Per cent of total	63.2	36.8
Average number of acres per farm	147.4	66.1
Average number of improved acres per farm	51.4	40.2
Value of farm land per acre ($)	5.07	5.95
Value of land per farm ($)	747	393
Value of buildings per farm ($)	268	82
Value of implements and machinery ($)	57	20
Value of live-stock ($)	194	93
Per cent of farms specializing in cotton	62.9	86.8
Per cent of farms specializing in hay and grain	10.6	3.6
Per cent of farms specializing in live-stock	7.0	1.0
Cost of labor (1899) per farm ($)	43	15
Cost of fertilizers per farm ($)	29	20
Value of products not fed to live-stock, per farm	458	328
Cost of labor (1899) per improved acre 1900	.83	.36
Cost of fertilizers per improved acre 1900	.56	.51
Value of products not fed, per improved acre 1900	8.90	8.20
Number of horses per farm	.72	.31
Number of mules per farm	.98	.82
Number of dairy cows per farm	1.59	.62
Number of other cows per farm	1.04	.20
Number of other cattle per farm	2.80	.76
Number of sheep per farm	2.34	.04
Number of goats per farm	.54	.09
Number of hogs per farm	8.06	3.42
Acres of cotton per farm	13.9	18.6
Acres of corn per farm	17.1	12.7
Acres of oats per farm	1.9	0.6
Acres of wheat per farm	1.9	0.5
Bales of cotton per acre	.36	.33
Bushels of corn per acre	10.5	8.2
Bushels of oats per acre	9.9	9.1
Bushels of wheat per acre	5.5	5.5

standards of living, like the Japanese, should once get a foothold, they might crowd out many of the whites and negroes.)

About 1905 the new-county fever broke out in Georgia, after being dormant for a quarter of a century, but it resulted in only one new county in the northern half of the state, namely, Stephens, in the upper Piedmont. As that is entirely surrounded by other upper Piedmont counties, it made no difference in the area, but simply made one more row of figures to be copied and added.

The census of 1910 was the most complete we have had so far. It was taken in April instead of in June as before, probably so as to find more city people at home, but the new date was of no particular advantage for an agricultural census, unless the farmers could remember their operations of the year before better in April than in June. On account of many farm animals being born in spring, their numbers in April of one year are not closely comparable with those in June of another.[4]

The 13th census gave the expenditures for stock feed for the first time, and more details about crops and animal products than ever before; and in a special volume published late in 1918 the farming operations of whites and negroes in 1900-10 were analyzed in considerable detail, by counties. There is indeed more information in the reports of that census than we can conveniently use; for example, the classification of animals by age and sex, statistics of farm mortgages, and many details about crops. But the value of each crop in each county is not given, so that if one wished to determine the relative importance of different crops in each region, it would be necessary to assume that the values per bushel or other unit are the same throughout the state, and multiply the regional totals by the state average values per unit. Some of the crops cannot even be compared on an acreage basis, for the acreage in peaches, apples, etc., is not given, but instead the number of trees. Worse still, several important crops, such as tomatoes, cabbage, watermelons, cantaloupes and numerous others are lumped together in the county tables under the head of "vegetables."

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[4] November would seem to be the best month for a census in the United States, except in the coldest and warmest portions. For then nearly everybody is at home, and the crops are mostly made, and the statsitics of acreage, fertilizers, crops, etc., would all pertain to the same year.

One serious error in the 1910 census figures for upper Georgia has been noticed. The receipts from the sale of animals in Cherokee County are given as $685,884, which is about one-tenth of the state total, and more than the total value of live-stock in that county given on another page. But I have recently ascertained by correspondence

TABLE 4.

GENERAL AGRICULTURAL STATISTICS OF UPPER GEORGIA, 1909-10.

	Appalachian Valley	Blue Ridge	Upper Piedmont	Lower Piedmont	Whole State
Inhabitants per square mile	49.2	**24.2**	*83.3*	44.5	44.4
Per cent increase since 1900	12.4	**—4.6**	*25.6*	6.5	17.7
Per cent white	81.1	*98.1*	73.7	**35.9**	54.9
Per cent colored	18.9	**1.9**	26.3.	*64.1*	45.1
Per cent in cities of over 2,500	14.9	**0**	*32.0*	6.2	20.6
Per cent of land improved	37.0	**17.0**	*43.0*	42.6	32.8
Improved acres per inhabitant	4.8	4.5	**3.3**	*6.1*	4.7
Value of farm land per acre ($)	13.04	**5.21**	*20.90*	13.85	13.74
Value of farm property per sq. mile ..	10330	**3685**	*17430*	11200	9880
Number of horses per square mile ...	*3.7*	**1.2**	3.1	2.3	2.04
Number of mules per square mile ...	5.9	**2.3**	8.0	*6.6*	5.03
Number of dairy cows per square mile	8.3	**5.6**	*10.7*	7.3	6.92
Number of other cattle per square mile	9.3	8.4	9.1	7.3	*11.5*
Number of sheep per square mile	3.3	*12.4*	0.5	**0.3**	3.2
Number of goats per square mile	*0.9*	0.3	**0.2**	0.8	1.53
Number of hogs per square mile	15.2	17.2	**12.4**	17.9	*30.4*
Number of poultry per square mile ..	134	75	*145*	95	90.8
Number of colonies of bees per sq. m.	3.3	4.0	*5 .2*	**1.6**	2.22
Av. value of horses per head ($)	102	**89**	112	*122*	118
Av. value of mules per head ($)	130	**114**	138	149	149
Av. value of cattle per head ($)	15.40	14.26	*17.40*	16.50	**13.00**
Av. value of sheep per head ($)	2.20	**1.49**	2.13	*2.35*	1.64
Av. value of goats per head ($)	1.50	1.54	*2.01*	1.32	**0.79**
Av. value of hogs per head	4.53	**2.85**	*6.72*	4.24	3.05
Av. value of poultry per head ($)	.39	.40	*.42*	.37	0.39
Cost of labor and board per impr. acre	.59	**.29**	.70	*1.09*	1.08
Cost of fertilizers per impr acre	.62	**.25**	*1.37*	1.18	1.38
Cost of feed per impr. acre	**.29**	.30	.49	*.53*	.33
Value of crops per impr. acre	12.90	**9.41**	*19.75*	18.90	18.50
Value of animal products per impr. a.	3.11	*4.33*	3.46	**1.77**	2.43

that the correct figure is probably $55,884, and that has been used accordingly.

In Table 4 the values of farm property and number of animals have been calculated per square mile as before, and a section is added for the value of animals per head, which shows some interesting differences between different regions. In Table 5 is set forth the number per farm and average value per head of different kinds of animals belonging to white and colored farmers in the whole state, these data not being available by counties.

TABLE 5.

Statistics of Live-Stock on Farms of White and Colored Farmers in Georgia, 1910.

	White	Colored
Number of horses per farm	0.54	0.23
Number of mules per farm	1.10	0.90
Number of dairy cows per farm	1.78	0.86
Number of other cattle per farm	3.33	0.92
Number of sheep per farm	1.10	0.02
Number of goats per farm	0.48	0.07
Number of hogs per farm	7.80	3.87
Number of poultry per farm	22.9	11.9
Number of colonies of bees per farm	0.72	0.08
Average value of horses per head ($)	121.00	111.00
Average value of mules per head ($)	149.60	147.00
Average value of cattle per head ($)	12.80	13.85
Average value of sheep per head ($)	1.64	1.66
Average value of goats per head ($)	0.78	0.80
Average value of hogs per had ($)	3.03	3.01
Average value of poultry per head ($)	0.40	0.38
Value of all animals per farm ($)	332.00	199.50

Tables 6 and 7 give nearly all the information about white and negro farmers in each region that can be extracted from the special volume on negro population previously mentioned. The census unfortunately has not published for 1910 (or any other period) the production and sale of milk, eggs, meat, etc., for the two races separately, even by states, although at the beginning of the third agricultural table for each southeastern state there are two empty columns (headed white and colored) which could have been filled with such information as easily as not. Thus a great opportunity to compare the dietary standards of the two races was let slip. For the difference between the amount produced and the amount sold, divided by the number of farms, gives approximately the amount consumed by the average farm family in the census year.

Between 1900 and 1910 the population of all regions in upper Georgia except the Blue Ridge increased as usual, especially in the cities, and the proportions of whites and negroes remained about the same. The ratio of improved land to population did not change much. The 13th Census was the first one to give separate figures for foreign-born farmers, but it did not give much information about them except the numbers of owners, managers, tenants, etc., just as the 12th census did for colored farmers. They constitute only a fraction of one per cent of all white farmers in Georgia, so that it is not worth while to say much about them, but it may be noted in passing that the percentage of farm owners among the foreigners was much higher than among native whites, in every region. Statistics of rural illiteracy show similar differences between natives and for-

TABLE 6.

STATISTICS OF WHITE FARMERS IN UPPER GEORGIA, 1909-10.

	Appalachian Valley	Blue Ridge	Upper Piedmont	Lower Piedmont	Whole State
Per cent of total in region	85.2	*99.2*	79.4	**35.7**	57.8
Per cent foreign-born	*.27*	**.13**	*.27*	.16	.23
Per cent owners and part owners ...	43.8	*64.7*	**42.7**	47.5	49.2
Per cent managers	0.5	0.5	**0.3**	*0.9*	0.7
Per cent tenants	55.8	**34.8**	*56.8*	51.7	50.1
Average number of acres per farm ...	90.0	117.0	**66.7**	114.5	*118.0*
Average number impr. acres per farm	41.6	**29.8**	32.0	*53.3*	44.6
Value of farm land per acre ($)	12.82	**5.20**	*20.30*	13.95	13.32
Value of farm land per farm ($)	1160	**610**	1355	*1600*	1573
Value of buildings per farm ($)	384	**187**	456	*637*	510
Value of implements and machinery..	74	**34**	77	*129*	97
Number of dairy cows per farm	1.47	1.54	**1.30**	1.72	*1.78*
Number of work horses per farm	0.60	?	0.38	*0.61*	0.51
Number of work mules per farm	1.03	?	0.94	*1.28*	1.09
Acres of cotton per farm	9.9	**0.8**	12.2	*21.4*	14.3
Acres of corn per farm	9.5	10.6	**8.3**	12.1	*12.5*
Bales of cotton per acre	.38	**.36**	*.44*	.42	.44
Bushels of corn per acre	12.8	*13.1*	12.3	**11.8**	12.6

eigners in the South—but the relations are reversed in the North and West, where foreigners are much more numerous and relatively inferior. (Some 1920 statistics for foreign farmers will be given farther on.)

The value of farm land per acre and of farm property per square mile apparently more than doubled, but most of that was due to increased gold production in Alaska and elsewhere, which made money cheaper and caused a rise of about 66 2/3% in the average prices of farm products during the decade. About 1910 some of the Georgia papers were full of accounts of sales of farm lands at the highest prices ever known (as if their value was just beginning to be appreciated), and at the same time there was a great outcry all over the country about the "high cost of living," which was regarded as a calamity and ascribed to all sorts of causes besides the real one, the mere cheapening of money. The highest land values are in the upper Piedmont, not because of any intrinsic superiority, but simply because the population is densest there.

Horses decreased a little in number, and sheep still more so, while mules, cows, hogs and chickens increased. The values of animals in different regions show some interesting variations. Horses and mules are cheapest in the Blue Ridge, probably because there is a larger proportion of young animals there than elsewhere, which brings down the average. The low value of hogs and sheep in the same region is doubtless correlated with the abundance of free range, on which inferior animals can be raised at small cost. (This will be illustrated still more strikingly in the next article, on lower Georgia.)

The cost of labor increased in about the same proportion as other prices, but fertilizers more, presumably indicating an increased use of the latter. High expenditures and crop values generally go with high land values, so that as population increases agriculture inevitably becomes more intensive; and the limit of the number of people that can be supported by a given area of land is still undetermined.

Table 5 shows that the negro farmer in Georgia has fewer animals of almost every description than his white neighbor, and they are apt to be less valuable. Cattle, sheep and goats are an apparent exception to the last statement, but that is easily explained by the fact that so many of them are scrubby animals on free range in the piney woods of South Georgia, where the farmers are mostly white.

TABLE 7.

STATISTICS OF NEGRO FARMERS IN UPPER GEORGIA, 1909-10.

	Appalachian Valley	Blue Ridge	Upper Piedmont	Lower Piedmont	Whole State
Per cent of total in region	14.8	**0.8**	20.6	*64.3*	42.2
Per cent owners and part owners ...	24.4	*53.5*	11.5	**7.2**	12.8
Per cent tenants	75.6	**46.5**	88.5	*92.7*	87.1
Average number of acres per farm ...	49.3	*64.3*	**44.0**	60.3	57.9
Average number impr. acres per farm	32.0	**20.0**	30.2	38.5	*39.1*
Value of farm land per acre ($)	15.25	**9.33**	*24.40*	14.09	14.93
Vaule of farm land per farm ($)	750	**618**	*1075*	820	864
Value of buildings per farm	169	**124**	*214*	181	188
Value of implements and machinery..	35	**18**	29	*37*	*37*
Number of dairy cows per farm	*1.01*	?	.81	.86	.86
Number of work horses per farm ...	*.27*	?	.17	.21	.23
Number of work mules per farm	.89	?	*.77*	*.94*	.90
Acres of cotton per farm	14.1	?	16.3	*21.7*	20.1
Acres of corn per farm	7.5	?	6.6	8.5	*10.5*
Bales of cotton per acre	.32	?	*.38*	.35	.38
Bushels of corn per acre	10.0	?	9.8	9.0	*10.1*

Turning now to the separate tables (6 and 7) for white and negro farmers, a few of their salient features may be pointed out. The largest farms for both races are in the Blue Ridge, but there they consist mostly of cheap wild land, so that the total area of farms does not mean much. The most improved acres per farm are in the lower Piedmont, showing that the influence of the large plantations of ante-bellum days is still felt. In value of land and buildings per farm the most prosperous whites are in the lower Piedmont, where there are plenty of negroes to do the work, while the most prosperous negroes are in the upper Piedmont, where they have plenty of white neighbors to set the pace for them. (White women can be seen working in the fields almost any day in the upper Piedmont, but rarely if ever in the lower Piedmont.) Both races specialize in cotton most in the lower Piedmont, but make the highest yields in the upper Piedmont, where the higher land values spur them to greater activity.

By 1920 there was one more county in the upper Piedmont (Barrow), but no new ones in the other regions. The census of 1920 was taken in January, when a good many farmers, especially tenants, had just moved to new locations and were therefore not prepared to give very accurate information about their holdings. (But if they all reported their operations of the previous year correctly perhaps no serious errors resulted when all the returns were consolidated.) The whole country was still somewhat unsettled on account of the recent world war (the price inflation not having reached its peak until the latter half of 1920, and some of the social and industrial disturbances being still in progress at this writing), so that the 14th Census may not have been as accurate as some of its predecessors. The value of live-stock products was returned less completely than before, figures for animals sold and slaughtered not being attempted at all.

Otherwise the scope of the agricultural census was most nearly like that of 1900; white and negro farmers being separated in the county tables only as to number and tenure. For the whole state the returns are analyzed more minutely, though, and there are now some separate figures for foreign white farmers of different nationalities. The number of female farmers was given for the first time, but that does not mean much, for they are probably mostly widows, operating farms for a short time between the administrations of husband and sons. (The principal difference between men's and women's farms is that the latter are smaller on the average.) For whole states the number of farms having telephones, automobiles, etc. was given, but as the races are not separated the totals mean very little in the South.[1]

Cattle in 1920 were divided into two classes, dairy and beef, and then subdivided according to age, sex, etc., as before. This was a welcome innovation, but it makes it impracticable to compare the 1920 figures with earlier ones unless all cattle are lumped together.

For the main table (8) the value of farm property and

TABLE 8.

GENERAL AGRICULTURAL STATISTICS OF UPPER GEORGIA, 1919-20.

	Appalachian Valley	Blue Ridge	Upper Piedmont	Lower Piedmont	Whole State
Inhabitants per square mile	52.0	**23.0**	*98.0*	46.8	49.3
Per cent increase since 1910	5.7	**—5.1**	*17.9*	5.1	11.0
Per cent white	84.1	*98.3*	75.2	**40.0**	58.3
Per cent colored	15.9	**1.7**	24.8	*60.0*	41.7
Per cent in cities with over 2500	15.2	0	*38.3*	11.3	25.1
Per cent of land improved	38.7	**15.1**	*43.6*	40.3	34.8
Improved acres per inhabitant	4.8	4.8	**2.9**	*5.5*	4.5
Per cent of farmers white	86.4	*99.6*	78.2	**35.5**	58.1
Per cent of white farmers owners ...	45.1	*67.6*	**42.7**	45.5	47.7
Per cent of white farmers tenants ...	54.6	**31.8**	*57.0*	53.7	51.5
Per cent of colored farmers owners ..	23.6	*70.4*	10.4	**8.5**	12.3
Per cent of colored farmers tenants ..	76.3	**25.9**	89.5	*91.4*	87.5
Value of farm land per acre $)	30.60	**13.10**	*59.70*	36.20	35.28
Value of farm property per sq. m...	23500	**7710**	*43700*	24980	23100
Number of horses per square mile ...	*3.7*	**1.2**	2.7	1.8	1.7
Number of mules per square mile ...	7.6	**3.0**	*11.8*	8.3	6.9
Number of beef cattle per square mile	2.7	4.4	**1.3**	2.8	*8.2*
Number of dairy cattle per square mile	14.9	**8.8**	*19.4*	13.2	11.5
Number of sheep per square mile....	1.3	*4.2*	**0.1**	0.2	1.2
Number of goats per square mile ...	1.0	0.3	**0.2**	0.6	*1.9*
Number of hogs per square mile ...	**18.1**	22.5	19.0	22.9	*35.2*
Number of chickens per square mile..	196	**104**	*224*	118	123
Number of other poultry per sq. m...	*7.9*	4.3	**4.2**	5.3	6.7
Number of colonies of bees per sq. m.	4.5	*6.4*	5.0	**1.3**	2.3
Cost of labor per improved acre ($) ..	.80	**.35**	1.01	*1.81*	1.46
Cost of fertilizers per impr. acre ($)..	1.86	**.72**	4.10	*4.11*	3.54
Cost of stock feed per impr. acre ($)	1.10	.79	*1.36*	1.03	**0.73**
Value of crops per impr. acre ($)...	44.00	**24.70**	*63.80*	47.80	41.45

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[1] The number of farms in Georgia reporting automobiles was 47,173. If we assume that 45,000 of the car-owning farmers were white, which is a conservative estimate, about one white farmer in four had a car. This is just about the same ratio as in New England.

number of animals are computed on a per square mile basis, for the same reason as in 1890 and 1900. Table 9, which could have been combined with 8 if there had been room enough on the page, gives the percentage of improved land in each of several important crops in 1919, and the average yield per acre, in each region.

Table 10 gives what ratios are available for native white, foreign white and negro farmers in the whole state in 1920. The returns for foreigners are less complete than for natives, or rather total whites, but in the last table (11) a few separate figures for different nationalities of foreign farmers are given. This last may not seem to have much bearing on Georgia history, but if the number of foreigners should increase, and similar or more complete data should be given by future censuses, it will be interesting to see to what extent the same nationalities maintain their relative rank in standards of living after they settle in Georgia. Similar figures for the same nationalities in other states

TABLE 9.

ACREAGE AND YIELD OF LEADING CROPS IN UPPER GEORGIA, 1919, BY REGIONS.

	Appalachian Valley	Blue Ridge	Upper Piedmont	Lower Piedmont	Whole State
Percentage of improved land in					
Cotton	29.9	**3.8**	46.2	*47.0*	36.2
Corn	**27.3**	*34.7*	29.5	27.8	32.8
Oats	0.49	**0.37**	0.82	1.14	*1.44*
Wheat	2.48	*3.70*	2.03	**0.97**	1.08
Peanuts	0.044	0	0.055	0.056	*0.155*
Irish potatoes	0.18	*0.60*	0.10	**0.06**	0.09
Sweet potatoes	**0.44**	0.52	0.74	0.69	*0.84*
Sorghum (for syrup)	0.43	*1.23*	0.56	0.47	**0.29**
Yield per acre					
Cotton (bales)	.474	.414	*.512*	.372	**.356**
Corn (bushels)	*15.8*	15.2	14.4	**12.0**	12.1
Oats (bushels)	14.0	**9.2**	13.2	*15.9*	14.7
Wheat (bushels)	7.1	**5.9**	7.3	*8.7*	7.7
Peanuts (bushels)	18.2	....	*19.7*	17.5	18.9
Irish potatoes (bushels)	60.8	**58.4**	*67.6*	65.2	62.0
Sweet potatoes (bushels)	97.0	**80.6**	*103.2*	88.3	92.1
Sorghum (gals. syrup)	*52.5*	51.4	**43.8**	48.0	48.8

could of course be computed right now, but that would be entirely outside of the scope of this paper.

Between 1910 and 1920 the population decreased again in the Blue Ridge, and increased fastest in the upper Piedmont, which has the most cities. (The rate of increase in rural population there was only 7%, though, while in the lower Piedmont it was practically at a standstill.) The percentage of whites increased in every region, for at least two independent reasons. The boll-weevil swept across the state during the decade and put many negro cotton pickers out of business, and the stoppage of immigration during the war made a shortage of unskilled and semi-skilled labor in northern factories, which was supplied by a great migration of negroes from all over the South. Pre-war conditions in this respect will probably never be restored, for during the war period many labor-saving devices, such as washing machines and tractors, were introduced both in the homes and on the farms, and they are not likely to be discarded, so that the South can get along very well indefinitely with fewer negroes than formerly. (If a successful cotton-picking machine should ever be invented it would doubtless cause a great slump in the negro population.)

Improved land changed very little, and improved acres per inhabitant decreased in most of the state. In comparing values with those of 1910 it should be borne in mind that on account of the inflation of the war period average commodity prices of 1920 were just about double those of 1910; but farm property must have gone up a little more than most other things, for the value in dollars was more than double in every region.

Horses and sheep decreased in numbers, as in the previous decade, while mules, hogs and poultry increased. Some of the horses were doubtless replaced by automobiles, but tractors do not seem to have superseded mules in Georgia to any considerable extent yet.

The expenditures for labor did not keep pace with the rise of prices, showing that more of the farmers did their own work in 1919 than ever before. At the same time the expenditures for fertilizer per acre about trebled, which may indicate that a larger quantity was used. The expenditures for feed increased nearly as much. The value of crops of course went up in a proportionate manner, but that of animal products cannot be estimated, for the reason given about three pages back.

Table 9 brings out a few interesting points about the acreage and yield of various crops in 1919. The acreage of cotton was about the same as in 1909, but the yield decreased, owing mostly to the boll-weevil, which entered the western part of the state in 1915 and migrated all the way across in a few years. The infestation must have been heaviest southward, though, judging by the low yield of cotton in the lower Piedmont and especially its western portion, and the farmers in the upper Piedmont seem to have made extra efforts to get a large yield in spite of the weevil, doubtless stimulated by the high price (about 36 cents a pound for the whole 1919 crop). Other crops were being substituted for cotton in some sections,[1] particularly peanuts, the acreage and yield of which have both increased largely in Georgia since the census first reported on them in 1890.

TABLE 10.

STATISTICS OF WHITE AND COLORED FARMERS IN GEORGIA, 1920.

	Native white	Foreign white	Negro
Per cent of total	58.0	0.1	41.9
Per cent owners and part owners	47.7	74.7	12.3
Per cent managers	0.8	4.9	0.2
Per cent tenants	51.5	20.4	87.5
Per cent of women farmers	3.3	?	6.2
Average number of acres per farm	101.4	221.5	54.3
Average number improved acres per farm	45.3	53.4	37.5
Value of farm land per acre ($)	34.37	?	37.62
Value of farm land per farm ($)	3500	19,200	2045
Value of buildings per farm ($)	1000		435
Value of implements and machinery	280	?	99
Value of live-stock per farm	610	?	347

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[1] On a trip from Athens to Macon (mostly through the lower Piedmont) on June 21, 1922, I saw very little cotton south of Madison. In Jasper and Jones Counties peaches are now one of the most important crops.

Variations in the yield of most of the other crops may be due to vicissitudes of weather, etc., but in the case of Irish potatoes, which had a lower yield than usual, it is possible that the soils were feeling the effects of a shortage of potash brought about by the war. This did not seem to affect sweet potatoes, which are commonly grown in poorer soils.

TABLE 11.

SELECTED STATISTICS OF FOREIGN WHITE FARMERS IN GEORGIA, 1920, BY PRINCIPAL NATIONALITIES.

Nationality	No. of farmers	% of total foreign	Acres per farm Total	Acres per farm Impr.	Value of Land & Buildings
German	81	24.7	173	60	31,300
English	51	15.6	189	59	22,700
Canadian	29	8.7	113	58	11,810
Swedish	16	4.9	169	50	8,370
Swiss	14	4.3	83	57	10,810
Dutch	14	4.3	155	66	11,510
Irish	14	4.3	92	48	4,230
Scotch	13	4.0	252	50	13,600
Austrian	13	4.0	128	30	2,610
Russian	11	3.4	1330	44	10,290
Hungarian	11	3.4	62	34	4,150

Table 10 shows much the same differences between white and negro farmers as before, and also that the few foreign white farmers in Georgia have larger and better farms than average native. It appears from Table 11 that different nationalities are very unequal in that respect, but in order to draw any important conclusions about them it would be necessary to compute similar data for neighboring states, and also for the North and West, where foreigners are more numerous and often less efficient than in the South.

In the next article the principal agricultural changes that have taken place in the whole state and its several regions between 1850 and 1920 will be summed up by means of diagrams and otherwise, which ought to give some idea of what further developments may be expected in the near future.